



TECHNICAL MEMORANDUM

TO: Miki Lloyd, P.E., Consultant Project Manager
Jeff Ebert, P.E., Butte District Administrator

FROM: Corey Lang, P.E.

DATE: April 2, 2008

SUBJECT: Draft Butte Interstate Study Environmental Resource Scan

1.0 INTRODUCTION

The Montana Department of Transportation has initiated Phase 2 of the Butte Interstate Traffic Study to develop options to address the deficiencies identified in Phase 1 between the Rocker interchange at milepost 122 to the East Butte interchange on I-15 (MP 129) and Continental interchange on I-90 (MP 230). This phase will develop a long-range plan for improvements to the overall interstate system within the Butte urban limits.

This environmental scan is intended to provide an overview of existing environmental conditions along the I-15/I-90 Corridor. Research and analysis was conducted through site visits, contact with the Butte-Silver Bow planning and GIS departments, Montana Environmental Protection Agency (MEPA), the Natural Resource Information System (NRIS), U.S. Census, Natural Resources Conservation Services (NRCS) and windshield survey of the project area. The analysis conducted to complete this environmental scan is not meant to meet National Environmental Policy Act (NEPA)/MEPA requirements, nor does it provide a detailed account of all resources present in the project area or impacts that may occur. However, this information has been provided to point out important resources of cultural and environmental concern that should be avoided and addressed in the decision-making process as potential projects are identified and move forward into NEPA/MEPA and preliminary design phases.

2.0 EXISTING CONDITIONS

The following sections summarize existing conditions along the I-15/I-90 Corridor, identifying resource specific impact concerns.

2.1 LAND USE AND SOCIOECONOMIC CHARACTERISTICS

Butte-Silver Bow County is currently updating their Growth Policy to create a community vision for the City's future. This future vision addresses the current challenges of depleting natural resources, an aging demographic, and a desire to revitalize the urban center through housing rehabilitation and infill development. In accordance with Montana state law, the 2008 Growth Policy to be adopted this year will

provide guidance on how land uses in the county's jurisdiction can be adapted to meet current socioeconomic trends.

Land uses adjacent to the I-15/I-90 Corridor are generally residential. Public open space lies adjacent to the highway from Harrison Avenue to the West Butte interchange. Clusters of commercial use currently exist near Harrison, Montana, and West Butte interchanges. Future commercial growth is designated to the east of the Continental Avenue interchange.

2.2 ENVIRONMENTAL JUSTICE

Executive Order 12898 and the implementing regulations require analysis to identify and address disproportionately high and adverse effects of federal actions on minority and low-income populations. An initial analysis of year 2000 U.S. Census data was conducted to determine whether such populations exist in or around the project area.

The majority (95%) of the Butte-Silver Bow population classified themselves as "white," according to year 2000 U.S. Census data. Further examination of census block demographics did not identify minority populations greater than the county or state minority percentage concentrated in any portion of the study area.

Several census block groups in the project area were identified as having higher percentage of households below the low-income threshold, as compared to Butte-Silver Bow County and the State. The low-income threshold was established at \$16,700 for a family of four, based on U.S. Department of Health and Human Services poverty threshold. Based on this finding, further evaluation will be required as individual projects are selected for improvement to determine if low-income populations actually exist and how the improvements affect these groups. In compliance with the executive order (EO), these populations must be afforded opportunity for involvement in the decisions made regarding the improvements that affect their area.

2.3 FARMLAND

Based on soil maps from the NRCS, there are two general areas where prime farmland or farmland of statewide importance have been identified in the project area. As identified in Figure A, they are located at the southern and western extents of the project area. Indicator soils at the southern project terminus are immediately west of the Continental Avenue interchange. However, this area is already zoned for commercial use and not considered useable farmland. If right-of-way acquisition is necessary for project alternatives involving other prime farmland near the western project terminus, completion of Form AD 1006 may be required. This would involve minimal analysis and coordination with the NRCS to obtain a farmland impact rating.

2.4 WETLANDS AND WATERS OF THE U.S.

Initial reconnaissance of the site was performed on August 21 and September 5, 2007. A total of 53 individual locations comprising over 172 acres of potential wetlands were identified within the project area, most of which are located between the Montana Street and Harrison Avenue interchanges, in and around Silver Bow Creek. Wetland areas are identified in Figure A. The U.S. Army Corps of Engineers

(COE) *Wetlands Delineation Manual* requires the simultaneous presence of hydrophytic vegetation, wetland hydrology, and hydric soils during the growing season to positively delineate an area as a wetland. Potential wetland locations were identified in the field by their position in the landscape (i.e., local topography), and by the presence of hydrophytic vegetation.

Section 404 of the Clean Water Act requires that all possible efforts must be taken to avoid or minimize harm to wetlands, specifically those with a surface connection to regulated waters of the U.S. Executive Order 11990 protects isolated wetlands by requiring the same effort to avoid or minimize harm. Both regulations require mitigation for wetland impacts that cannot be avoided. A Section 404 Permit would be required with the COE for impacts to wetlands under their jurisdiction. In addition, a Montana Stream Protection Act (124) certification would be required if the project affects the natural existing shape and form of any stream or its banks. Specific provisions included in these permits would be followed, and may include timing restrictions and/or design requirements in order to limit disturbances to spawning trout and other fish species.

A total of 17 potential non-wetland waters of the U.S. were identified within the project area. Because they are mapped features, all 17 of the drainage features are preliminarily considered to be jurisdictional. However, further investigation and consultation with the COE may increase or decrease the number of non-wetland waters of the U.S. in the project area.

2.5 THREATENED AND ENDANGERED SPECIES

Based on the United States Fish and Wildlife Service (USFWS) statewide Montana County list (USFWS, 2007) and range/habitat descriptions found in technical literature, two listed species were identified as having potential to occur in the project area, the Gray wolf (*Canis lupus*, endangered) and Bull trout (*Salvelinus confluentus*, threatened). Further evaluation and coordination with USFWS and Montana Fish and Wildlife Parks (MFWP) would be required as part of improvement plans on the highway.

Due to recent reintroductions of the gray wolf into parts of northern Wyoming and central Idaho, the gray wolf populations south of I-90 are considered non-essential experimental populations. However, the populations north of I-90 are listed as endangered. Due to the relatively urban nature of the project area, wolves are not expected to occupy habitats in this vicinity. It is conceivable, though considered relatively unlikely, that transient wolves may pass through the eastern end of the project area, southeast of the I-90/I-15 interchange.

Although no Bull trout have been documented in any of the streams that occur in the project area (MFWP, 2007), critical habitat for Bull trout does occur downstream in tributaries to the upper Clark Fork River. The closest tributary containing critical Bull trout habitat, Warm Springs Creek, is located approximately 18 miles downstream of the project area. Based on the known occurrence of Bull trout and the location of the project relative to designated critical habitat, Bull trout are not expected to be an issue for any future roadway improvements in the project area.

2.5.1 Sensitive Species of Special Concern

The Montana National Heritage Program (MNHP) lists 53 Sensitive Species of Special Concern as having habitat in Silver Bow County. Of these, 32 species are considered likely or somewhat likely to occur in

the project area, based on habitat preferences, as listed below. The MNHP ranks each species based on population, geographic diversity, and other factors that relate to risk of species extinction. Further evaluation of potential impacts to preferred habitat of these species should be performed as part of project analysis.

- Western Toad (*Bufo boreas*)
- American White Pelican (*Pelecanus erythrorhynchos*)
- Bald Eagle (*Haliaeetus leucocephalus*)
- Black Rosy-finch (*Leucosticte atrata*)
- Black Tern (*Chlidonias niger*)
- Black-and-white Warbler (*Mniotilta varia*)
- Black-crowned Night-heron (*Nycticorax nycticorax*)
- Bobolink (*Dolichonyx oryzivorus*)
- Ferruginous Hawk (*Buteo regalis*)
- Forster's Tern (*Sterna forsteri*)
- Franklin's Gull (*Larus pipixcan*)
- Grasshopper Sparrow (*Ammodramus savannarum*)
- Gray-crowned Rosy-finch (*Leucosticte tephrocotis*)
- Great Gray Owl (*Strix nebulosa*)
- Greater Sage-grouse (*Centrocercus urophasianus*)
- Harlequin Duck (*Histrionicus histrionicus*)
- Lark Bunting (*Calamospiza melanocorys*)
- Lewis's Woodpecker (*Melanerpes lewis*)
- Loggerhead Shrike (*Lanius ludovicianus*)
- Long-billed Curlew (*Numenius americanus*)
- McCown's Longspur (*Calcarius mccownii*)
- Mountain Plover (*Charadrius montanus*)
- Northern Goshawk (*Accipiter gentilis*)
- Olive-sided Flycatcher (*Contopus cooperi*)
- Peregrine Falcon (*Falco peregrinus*)
- Swainson's Hawk (*Buteo swainsoni*)
- Trumpeter Swan (*Cygnus buccinator*)
- White-faced Ibis (*Plegadis chihi*)
- Yellow-billed Cuckoo (*Coccyzus americanus*)
- Arctic Grayling (*Thymallus arcticus*)
- Westslope Cutthroat Trout (*Oncorhynchus clarkii lewisi*)
- Canada Lynx (*Lynx Canadensis*)
- Fringed Myotis (*Myotis thysanodes*)
- Preble's Shrew (*Sorex preblei*)
- Townsend's Big-eared Bat (*Corynorhinus townsendii*)
- Wolverine (*Gulo gulo*)
- Dense-leaf Draba (*Draba densifolia*)
- Dwarf Phacelia (*Phacelia scopulina*)
- Hall's Rush (*Juncus hallii*)
- Idaho Sedge (*Carex idaho*)
- Lemhi Beardtongue (*Penstemon lemhiensis*)
- Linear-leaf Fleabane (*Erigeron linearis*)
- Mojave Brickellbush (*Brickellia oblongifolia*)
- Rocky Mountain Twinpod (*Physaria saximontana* var. *dentate*)
- Sapphire Rockcress (*Arabis fecunda*)
- Small-flowered Pennycress (*Thlaspi parviflorum*)
- Sword Townsendia (*Townsendia spathulata*)

2.6 WILDLIFE AND AQUATIC SPECIES

Seven streams are mapped as perennial streams in the project area by the U.S. Geological Survey (USGS) and include Basin Creek, Blacktail Creek, Gimlet Gulch, Mode-S Canyon, Sand Creek, Silver Bow Creek, Unnamed drainage #1, and Whiskey Gulch. Of these seven streams, three appear to have been sampled for fish by the MFWP and are documented in the MFISH database.

Brown trout (*Salmo trutta*) is the only fish species suspected to occur in Silver Bow Creek, and only in the lower 10 miles of the creek, near its confluence with Warm Springs Creek (MFWP, 2007). Brook trout (*Salvelinus fontinalis*) and westslope cutthroat trout (*Oncorhynchus clarkii lewisi*) inhabit Blacktail Creek (MFWP, 2007). In Basin Creek brook trout inhabit the lower portion of the creek, while westslope cutthroat inhabit its headwaters (MFWP, 2007).

Mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), long-tailed weasel (*Mustela frenata*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), deer mouse (*Peromyscus maniculatus*), meadow vole (*Microtus pennsylvanicus*),

Columbian ground squirrel (*Spermophilus columbianus*), red squirrel (*Tamiasciurus hudsonicus*), white-tailed jack rabbit (*Lepus townsendii*), and yellow-bellied marmot (*Marmota flaviventris*) are common mammals occupying habitats in the vicinity and may occasionally occur within the project area throughout the year.

Amphibians which may occur in the general project vicinity include the long-toed salamander (*Ambystoma macrodactylum*), Columbia spotted frog (*Rana luteiventris*), and western toad (*Bufo boreas*) (Werner et al. 2004). Reptiles which may occur in the general project vicinity include rubber boa (*Charina bottae*), eastern racer (*Coluber constrictor*), gopher snake (*Pituophis melanoleucus*), western rattlesnake (*Crotalus viridis*), terrestrial garter snake (*Thamnophis elegans*), and common garter snake (*Thamnophis sirtalis*) (Werner et al. 2004). No amphibians or reptiles were observed during the field surveys.

According to the Montana Bird Distribution Database (MBDD) up to 256 different bird species have been identified within proximity to the project area. Commonly encountered species include American robin (*Turdus migratorius*), Red-winged Blackbird (*Agelaius phoeniceus*), Black-capped Chickadee (*Parus atricapillus*), Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*), Common Raven (*Corvus corax*), Rock Dove (*Columba livia*), Black-billed Magpie (*Pica pica*), Western Meadowlark (*Sturnella neglecta*), Mountain Bluebird (*Siala currucoides*), and Mallard (*Anas platyrhynchos*).

Because virtually all of the proposed improvements would occur in areas that are immediately adjacent to the existing highway, habitats potentially affected by the project are generally anticipated to be of moderate-low to low overall quality. Indirect disturbance to wildlife communities in the project area resulting from construction is considered minor, as the disturbance would be temporary, resident wildlife and birds have become to tolerant (i.e., habituated) to relatively high noise volumes associated with the existing roadway, and much of the project area is already developed. The survival of displaced species residing exclusively within the construction area (e.g., species with very limited home ranges, such as mice and voles), however, would depend on the carrying capacity of adjacent undeveloped habitat. Additionally, since habitat fragmentation has already occurred extensively in the project area, if additional habitat fragmentation does occur its effect on resident wildlife populations is expected to be minimal.

2.7 NOXIOUS WEEDS

Executive Order 13112 and the Montana County Noxious Weed Control Law both address concern and establish responsibilities regarding the proliferation of invasive plant species or noxious weeds. At least six noxious weed species were identified in the project area at the time of field reconnaissance. Provisions for best management practices will be required as part of construction plans to minimize the spread of noxious weeds.

2.8 SECTION 4(F)

The City and County of Butte-Silver Bow maintains numerous parks and recreational facilities throughout the region, three of which are located within or immediately adjacent to the project area. Several recreational trails also pass through the project area. These facilities are illustrated in Figures A-C and include:

- C Street Park
- Father Sheehan Park
- High Altitude Park
- Ulrich-Schulte Nature Trail
- Rails to Trails Regional Trails

As publicly-owned park and/or recreation facilities, they are protected under the U.S. Department of Transportation Act of 1966, commonly known as “Section 4(f).” This Act provides that a use of land from such properties cannot be approved for transportation improvements unless it can be demonstrated that there is no other prudent and feasible alternatives to using that land and the action includes all planning to minimize harm to the property. Any improvements that impact these public facilities will require additional analysis and process to ensure avoidance or least harm.

In addition to protection under Section 4(f), Father Sheehan Park is also protected under Section 6(f) of the Land and Water Conservation Fund Act (LWCF). Because federal funding from the LWCF was obtained by Butte-Silver Bow County for the development of this park, Section 6(f) protects this property from development or conversion other than for public outdoor recreation uses. A land conversion may only be approved if a substitution of other recreation properties of equal or greater value and equivalent usefulness as the property being converted.

2.9 WATER RESOURCES

Portions of the Silver Bow Creek 100-year floodplain fall within the interstate project area. Silver Bow Creek passes under I-15/90 southeast of the West Butte interchange. Executive Order 11988 requires avoidance of development within designated floodplains where other practical alternatives exist. Further analysis would be required during project design to determine if improvements would encroach on the flood area.

Section 303(d) of the Clean Water Act requires that states identify water bodies that do not meet regulatory water quality standards. Accordingly, Silver Bow Creek has been listed as impaired water on EPA’s 303(d) list for multiple biennial cycles (1996, 1998, 2000, 2002, and 2004) for heavy metals including arsenic, cadmium, copper, lead, selenium, zinc, iron and nickel. Other impairments not listed include total dissolved solids, noxious aquatic plants, and fluoride. The limits of this impairment extend from Warm Springs Pond 2 outlet to the headwaters of this drainage. This contamination is due to the extensive deposition of mining waste and other industry along Silver Bow Creek, as discussed in the Hazardous Materials section. Montana’s Department of Environmental Quality has established a Total Maximum Daily Load (TMDL) for heavy metals found in the Silver Bow Creek. Ongoing management measures have been undertaken to manage the pollutant levels in this watershed.

2.10 HAZARDOUS MATERIALS SITE

There are three Superfund sites within or adjacent to the project area: The Rocker Timber Framing and Treating Plant Operable Unit, the Montana Pole Site, and the Lower Area I Operable Unit. Although geographically separated, the Rocker and Lower Area I are both part of the Silver Bow Creek/Butte Area Superfund site. The Montana Pole site is separate, yet adjacent to Lower Area I and was listed as a Superfund site based on separate contaminants than the others. The current status of each Superfund site is described in paragraphs to follow. The NRIS database also lists numerous other hazardous material

sites throughout the project area consisting of storage tanks, of which some have reported leaks. These tank sites are clustered around the Montana Street and Harrison Avenue interchanges. Hazardous material sites are shown in Figures A and B. If right of way acquisition would be required for future interchange improvements, Phase I site assessments would be required, at a minimum to determine potential contamination present in these areas.

2.10.1 Rocker Timber Framing and Treating Plant Operable Unit

The Rocker Superfund Operable Unit is located immediately south of I-15/I-90 at the Rocker interchange, approximately seven miles west of Butte. This site is part of the Silver Bow Creek/Butte Area Superfund site. It was formerly a wood treatment plant that produced wood treated for use in mine in the Butte area, resulting in arsenic and other wood treatment byproducts contaminating the soils and groundwater. Initial cleanup actions began in 1989. Additional treatment included onsite treatment of soil and groundwater. Long-term monitoring began in 1998. Although future remediation actions may be necessary, current treatment at this site is considered protective of human health.

2.10.2 Montana Pole Site

The Montana Pole Superfund Site spans across I-15/I-90 approximately 2,000 feet from the western ramps of the Montana Street interchange. This is a former wood treatment facility that used polychlorophenol (PCPs) to treat utility poles and bridge timbers between 1946 and 1983. Byproducts of the treatment process were subsequently discharged into an adjacent ditch and began flowing into Silver Bow Creek. Environmental toxins include PCPs, furans, dioxins, volatile organic compounds (VOCs) and heavy metals. This site is one of four Superfund sites in the Clark Fork Basin and was added to the NPL in 1987. Clean-up at this site has been addressed in phases. PCP-contaminated waste oil and sludge have been transported off site. Additional contaminated soil has been excavated and stored in a fenced area on-site. Barriers have been installed to prevent PCP contamination in the groundwater from seeping into Silver Bow Creek. A groundwater recovery and treatment system has been installed. Treated water is then discharged into Silver Bow Creek. Soil and groundwater treatment continues on site. This site is considered in operation and maintenance status.

2.10.3 Lower Area I Operable Unit

The Lower Area I Operable Unit is part of the Silver Bow Creek/Butte Area Superfund Site and was added to the NPL in 1983. It is located along Silver Bow Creek between the West Butte and Montana Street interchanges along I-15/I-90. The Silver Bow Creek/Butte Area Site is one of four contamination areas, jointly known as the Clark Fork Basin Sites. Contamination at this site is a result of long term deposition of mining, smelting, industrial, and municipal waste into Silver Bow Creek. Consequently, soils, ground and surface waters have been contaminated with heavy metals such as arsenic, copper, zinc, and lead, limiting aquatic life in the creek and posing serious health threats from direct contact with contaminated soils, groundwater, or inhaling contaminated air. In the 1990s manganese stockpiles and mine tailing were removed from the site and backfilled with clean material. The stream channel and floodplain were reconstructed. A groundwater collection and treatment system has been installed. However, contaminated soils remain beneath the Metro Sewage Treatment Plant, historic slag walls, and the railroad grade. This location becomes saturated with groundwater due to its location within the Silver Bow Creek floodplain. Hydraulic controls have been constructed to prevent seepage of contaminated groundwater into Silver Bow Creek. This approach has been effective in capturing groundwater flow beneath this site from entering the Silver Bow Creek. The BSB Health department continues to monitor of

lead blood levels in children, arsenic and other metals contamination in residential yards and attic dust and offers remediation assistance where levels are reported above federally acceptable standards.

2.11 NOISE

A traffic noise study was conducted to identify existing and future traffic noise levels along I-15/90 through Butte, Montana as part of the Phase 1 report. This noise study was conducted in accordance with Montana Department of Transportation's (MDT) *Traffic Noise Analysis and Abatement: Policy and Procedure Manual, June 2001*, which is consistent with FHWA's procedures. A total of 83 noise-sensitive receptors representing up to 380 single-family residences, 14 mobile homes, 48 apartments, 3 hotels, 1 school, 1 park and 4-Ulrich-Schulte Nature Trail locations were identified within approximately 500 feet of the centerline of I-15/90. Based on the results of the initial noise study, various neighborhoods (15 receptors) are currently impacted by traffic noise from the I-15/90 interstate facility. This represents over 80 individual single-family residences. Future year (2025) forecast estimated that eighteen receptors will exceed the noise levels as defined by FHWA and MDT guidelines. Noise abatement measures should be considered for future projects in areas that are practicing noise compatible land use planning and/or noise mitigated developments. 66 dBA and 71dBA noise contours were developed as part of this noise study for future planning purposes and are shown in Figures B and C.

2.12 AIR QUALITY

As required by the Clean Air Act, cities and regions must comply with Federal and state standards for certain criteria pollutants, such as carbon monoxide, nitrogen dioxide (NO₂), ozone, and particulate matter. The national standards are collectively called the national ambient air quality standards (NAAQS); likewise, Montana's standards are the Montana ambient air quality standards (MAAQS).

The Butte-Silver Bow region is currently designated by the State as a non-attainment area for PM-10 (particulate matter), meaning that concentrations of particulate matter exceed Montana's standards for PM₁₀, which is in this case the same as national standards. As such, the region has developed an implementation plan to reduce pollutants that cause excessive particulate matter. Because of Butte's non-attainment status, any transportation improvements that result from the Butte Interstate Study will have to be analyzed to ensure that such improvements do not contribute to additional degradation of PM₁₀ levels in the Butte-Silver Bow area. It is not anticipated that operational improvements under consideration would have negative long term air quality impacts.

2.13 HISTORIC/CULTURAL

As a community with a rich culture and history, the majority of Butte's urban core is designated as a National Historic District. Originally designated in 1961, the district is nationally significant as it relates to its history in copper production and the formation of labor unions. In 2006 this district was expanded to include the areas of Walkerville, Anaconda, and the Butte/Anaconda and Pacific railroad bed. As a National Historic District, there are multiple properties within the district that contribute to its historic significance, some of which are likely located within the project area. A formal records search by the Montana Historic Society would be required to identify specific properties that are eligible for listing on the National Register of Historic Places.

2.14 VISUAL/AESTHETIC

Butte is surrounded by rims of mountain ranges, providing stunning views from nearly every vantage point in the City. The eastern portion of the project area is dominated by urban views to the west in a residential setting and mountain views to the east. From Montana Street to the West Butte interchange, the area is mostly industrial, with Silver Bow Creek on the north. Further west, the project area becomes rural with view of the mountains to the north. Consideration should be given for transportation improvements that provide little variation to the grand views of the City and adjacent mountains from the interstate system.